Journal of Crystal Growth 100 (1990) 677–681
North-Holland



# AUTHOR INDEX


Akimoto, K., see Tamamura 100 (1990) 643
Alexander, J.I.D., see Xiao 100 (1990) 313
Ando, M., see Yasuami 100 (1990) 600
Aono, M.I., see Shigematsu 100 (1990) 661
Azoury, R., see Feinstein-Jaffe 100 (1990) 68

Balasubramanian, R., see Shetty 100 (1990) 51
Balasubramanian, R., see Shetty 100 (1990) 58
Barber, P.G. and J.T. Petty, Use of moments of momentum to predict the crystal habit in potassium hydrogen phthalate 100 (1990) 185
Bennema, P., see Vogels 100 (1990) 439
Bernstein, J., see Feinstein-Jaffe 100 (1990) 68
Biala, N., see Manne 100 (1990) 627
Blackmore, G.W., see Falconer 100 (1990) 275
Boazi, M., see Feinstein-Jaffe 100 (1990) 68
Bocelli, G., see Kumar 100 (1990) 651
Boekholt, M., see Fotiadis 100 (1990) 577
Bohnert, G., see Weber 100 (1990) 467
Brush, L.N., R.F. Sekerka and G.B. McFadden, A numerical and analytical study of nonlinear bifurcations associated with the morphological stability of two-dimensional single crystals 100 (1990) 89

Chang, S.-L., see Liaw 100 (1990) 508
Chapon, C., see Giorgio 100 (1990) 254
Chauhan, G., see Dawar 100 (1990) 281
Chen, Jiming, see Wang 100 (1990) 447
Chierchie, T., see Rigano 100 (1990) 212
Chou, K.-S., see Liaw 100 (1990) 508
Christoffersen, J. and M.R. Christoffersen, Kinetics of spiral growth of calcite crystals and determination of the absolute rate constant 100 (1990) 203
Christoffersen, M.R., see Christoffersen 100 (1990) 203
Cockayne, B., see Jones 100 (1990) 395
Coriell, S.R., see Wheeler 100 (1990) 78
Coriell, S.R., G.B. McFadden and R.F. Sekerka, Effect of anisotropic thermal conductivity on the morphological stability of a binary alloy 100 (1990) 459
Crowley, A.B., see Hurle 100 (1990) 11
Cundy, C.S., B.M. Lowe and D.M. Sinclair, Direct measurements of the crystal growth rate and nucleation behaviour of silicalite, a zeolitic silica polymorph 100 (1990) 189

D'Anterroches, C., see Poudoulec 100 (1990) 529
Dash, J.G., Effects of substrate heterogeneity on the growth of physisorbed films 100 (1990) 268
Dawar, A.L., P.K. Shishodia, G. Chauhan, C. Jagadish, S.K. Kapoor and P.C. Mathur, Effect of hydrogen annealing on structural and optical properties of ZnSe thin films 100 (1990) 281
De Blasi, C., D. Manno and A. Rizzo, Study of the polytypism in melt grown InSe single crystals by convergent beam electron diffraction 100 (1990) 347
De Vreugd, C.H., P.F.M. Durville and G.M. van Rosmalen, Adsorption behaviour of polyelectrolytes in relation with crystal growth kinetics of calcium fluoride 100 (1990) 117
Dou, S.X., see Guo 100 (1990) 303
Duffar, T., I. Paret-Harter and P. Dusserre, Crucible de-wetting during Bridgman growth of semiconductors in microgravity 100 (1990) 171
Durville, P.F.M., see De Vreugd 100 (1990) 117
Dusserre, P., see Duffar 100 (1990) 171

Easterling, K.E., see Guo 100 (1990) 303
Ehrensperger, M., see Hulliger 100 (1990) 640
Elwenspoek, M., see Vogels 100 (1990) 439
Evans, D.J.F., see Frank 100 (1990) 354

Falconer, J.E., H.D. Palfrey and G.W. Blackmore, Diffusion of arsenic in epitaxial $Cd_xHg_{1-x}Te$ 100 (1990) 275
Feinstein-Jaffe, I., R. Azoury, J. Bernstein, J.A.R.P. Sarma and M. Boazi, Identification and characterization of crystalline and amorphous HM-PAO fractions: their relevance for preparation of the $^{99m}$Tc-d,l-HM-PAO brain perfusion imaging agent 100 (1990) 68
Földvári, I., Á. Péter, R. Voszka and L.A. Kappers, Growth and properties of $Bi_2TeO_5$ single crystals 100 (1990) 75
Fontcuberta, J., see Piñol 100 (1990) 286
Forchel, A., see Weber 100 (1990) 467
Fotiadis, D.I., M. Boekholt, K.F. Jensen and W. Richter, Flow and heat transfer in CVD reactors: comparison of Raman temperature measurements and finite element model predictions 100 (1990) 577
Frank, F.C., A.R. Lang, D.J.F. Evans, M.-L.T. Rooney, P.M. Spear and C.M. Welbourn, Orientation-dependent nitrogen incorporation on vicinals on synthetic diamond cube growth surfaces 100 (1990) 354

Franke, D., P. Harde, P. Wolfram and N. Grote, Doping and diffusion behaviour of Fe in MOVPE grown InP layers 100 (1990) 309

Gandais, M., see Ramos 100 (1990) 471

Ghassempoory, M., see Hurle 100 (1990) 11

Giorgio, S., C.R. Henry, C. Chapon and J.M. Penisson, Structure and morphology of small palladium particles (2–6 nm) supported on MgO micro-cubes 100 (1990) 254

Gnanam, F.D., see Kumar 100 (1990) 651

Goto, Y., see Zhang 100 (1990) 411

Gotoda, M., S. Maruno, Y. Morishita, Y. Nomura, H. Ogata, K. Kuramoto and H. Kuroki, Characteristics of carbon incorporation in GaAs grown by gas source molecular beam epitaxy 100 (1990) 5

Grote, N., see Franke 100 (1990) 309

Gryte, C.C., see Manne 100 (1990) 627

Guenais, B., see Poudoulec 100 (1990) 529

Guo, S.J., K.E. Easterling, S.X. Dou and H.K. Liu, Improved single crystal growth in the Bi–Sr–Ca–Cu–O system using a sealed cavity technique 100 (1990) 303

Hammel, A., see Weber 100 (1990) 467

Hangleiter, A., see Weber 100 (1990) 467

Harde, P., see Franke 100 (1990) 309

Hartman, P., see Sun 100 (1990) 605

Hata, M., see Isu 100 (1990) 433

Heminger, J.A., see Humphreys 100 (1990) 31

Henkel, D., see Wenzl 100 (1990) 377

Henry, C.R., see Giorgio 100 (1990) 254

Higashi, I., see Shigematsu 100 (1990) 661

Higashi, Y., see Yasuami 100 (1990) 600

Hillen, H., see Walker 100 (1990) 168

Holt, D.B. and G. Salviati, Twinning and impurity segregation in Cr- and Fe-doped LEC InP 100 (1990) 497

Hörcher, G., see Weber 100 (1990) 467

Hosaka, M. and S. Taki, Raman spectral studies of $SiO_2$–NaOH–$H_2O$ system solution under hydrothermal conditions 100 (1990) 343

Hoshino, K., see Shigematsu 100 (1990) 661

Huang Weidong, Wei Quiming and Zhou Yaohe, Non-steady solute redistribution during the transient process of alloy solidification 100 (1990) 26

Hulliger, J., W.S. Wang and M. Ehrensperger, 2-(N-(L)-prolinol)-5-nitropyridine (PNP): solution growth of a new nonlinear optical crystal 100 (1990) 640

Humphreys, L.B., J.A. Heminger and G.W. Young, Morphological instability in a float zone 100 (1990) 31

Hurle, D.T.J., G.C. Joyce, M. Ghassempoory, A.B. Crowley and E.J. Stern, The dynamics of Czochralski growth 100 (1990) 11

Hurle, D.T.J., see Wheeler 100 (1990) 78

Ichihara, M., see Iwanaga 100 (1990) 271

Iliev, K., P. Peshev, V. Nikolov and I. Koseva, Physicochemical properties of high-temperature solutions of the $K_2O$–$P_2O_5$–$TiO_2$ system suitable for the growth of $KTiOPO_4$ (KTP) single crystals 100 (1990) 219

Iliev, K., P. Peshev, V. Nikolov and I. Koseva, Physicochemical properties of high temperature solutions of the $K_2O$–$P_2O_5$–$TiO_2$–$WO_3$ system, suitable for the growth of $KTiOPO_4$ (KTP) single crystals 100 (1990) 225

Ishikawa, M., see Nishikawa 100 (1990) 63

Ishizawa, Y., see Otani 100 (1990) 658

Isu, T., A. Watanabe, M. Hata and Y. Katayama, In-situ microscopic observation of GaAs surfaces during molecular beam epitaxy and metalorganic molecular beam epitaxy by scanning microprobe reflection high energy electron diffraction 100 (1990) 433

Iwanaga, H., S. Motojima, M. Ichihara and S. Takeuchi, Amorphous $Si_3N_4$ whiskers containing a crystalline core 100 (1990) 271

Jagadish, C., see Dawar 100 (1990) 281

Jensen, K.F., see Fotiadis 100 (1990) 577

Jones, A.C., P.J. Wright, P.E. Oliver, B. Cockayne and J.S. Roberts, Growth of $Al_xGa_{1-x}As$ by MOVPE using alternative alkylaluminium precursors 100 (1990) 395

Jones, Y., see Walker 100 (1990) 168

Joyce, G.C., see Hurle 100 (1990) 11

Kaneda, S., see Motoyama 100 (1990) 615

Kapoor, S.K., see Dawar 100 (1990) 281

Kappers, L.A., see Földvári 100 (1990) 75

Katayama, Y., see Isu 100 (1990) 433

Kawata, H., see Yasuami 100 (1990) 600

Kim, K.M. and P. Smetana, Maximum length of large diameter Czochralski silicon single crystals at fracture stress limit of seed 100 (1990) 527

Kinno, H., see Kubota 100 (1990) 491

Kinoshita, T., see Zhang 100 (1990) 411

Kitai, A.K., see Sanders 100 (1990) 405

Kobayashi, T. and N. Uyeda, Structure and defects of a linear chain polymer film; GeO phthalocyanine epitaxially grown on KCl (E) 100 (1990) 676

Kokubun, Y., see Nishikawa 100 (1990) 63

Koseva, I., see Iliev 100 (1990) 219

Koseva, I., see Iliev 100 (1990) 225

Kubota, N., H. Kinno, and K. Shimizu, Heterogeneous nucleation of aspartame from aqueous solutions 100 (1990) 491

Kumar, J., M. Thirumavalavan, F.D. Gnanam, P. Ramasamy and G. Bocelli, Growth, morphological and structural investigations of neodymium aluminium borate crystals from different flux systems 100 (1990) 651

Kuramoto, K., see Gotoda 100 (1990) 5
Kuroki, H., see Gotoda 100 (1990) 5
Kuroyanagi, A. and T. Suda, Single crystal growth and characterization of zinc phosphide 100 (1990) 1

Lang, A.R., see Frank 100 (1990) 354
Langlois, W.E., see Williams 100 (1990) 233
Lee, C.Y., see Vuillemin 100 (1990) 279
Leiberich, A. and J. Levkoff, The crystal geometry of $Al_xGa_{1-x}As$ grown by MOCVD on offcut GaAs (100) substrates 100 (1990) 330
Liaw, I.-R., K.-S. Chou and S.-L. Chang, X-ray double-crystal diffraction studies of CdTe/GaAs heteroepitaxial layers 100 (1990) 508
Lie, K.H., J.S. Walker and D.N. Riahi, Free surface shape and AC electric current distribution for float zone silicon growth with a radio frequency induction coil 100 (1990) 450
Liu, H.K., see Guo 100 (1990) 303
Levkoff, J., see Leiberich 100 (1990) 330
Lowe, B.M., see Cundy 100 (1990) 189
Luo, Zundu, see Wang 100 (1990) 447

Mächtle, W., see Walker 100 (1990) 168
Makarov, Yu.N. and A.I. Zhmakin, Control of composition variation in MOVPE AlGaAs growth 100 (1990) 646
Manne, J.S., N. Biala, A.D. Smith and C.C. Gryte, The effect of anionic polyelectrolytes on the crystallization of calcium oxalate hydrates 100 (1990) 627
Manno, D., see De Blasi 100 (1990) 347
Marcinowski, S., see Walker 100 (1990) 168
Marsman, H.A.M., see Vogels 100 (1990) 439
Maruno, S., see Gotoda 100 (1990) 5
Mathur, P.C., see Dawar 100 (1990) 281
McFadden, G.B., see Wheeler 100 (1990) 78
McFadden, G.B., see Brush 100 (1990) 89
McFadden, G.B., see Coriell 100 (1990) 459
Mika, K., see Wenzl 100 (1990) 377
Miravitlles, C., see Piñol 100 (1990) 286
Mori, Y., see Tamamura 100 (1990) 643
Morikawa, N., see Motoyama 100 (1990) 615
Morishita, Y, see Gotoda 100 (1990) 5
Moser, M., see Weber 100 (1990) 467
Motojima, S., see Iwanaga 100 (1990) 271
Motoyama, S., N. Morikawa and S. Kaneda, Low-temperature growth and its growth mechanisms of 3C-SiC crystal by gas source molecular beam epitaxial method 100 (1990) 615
Müller, G., see Weber 100 (1990) 145

Nakayama, M., see Zhang 100 (1990) 411
Neumann, G., see Weber 100 (1990) 145
Nikolov, V., see Iliev 100 (1990) 219
Nikolov, V., see Iliev 100 (1990) 225
Nishikawa, Y., M. Ishikawa, Y. Tsuburai and Y. Kokubun, Lattice constant shift in Zn-doped InGaAlP grown by low-pressure metalorganic chemical vapor deposition 100 (1990) 63
Nomura, Y., see Gotoda 100 (1990) 5

Ogata, H., see Gotoda 100 (1990) 5
Ogino, T., T. Suzuki and K. Sawada, The rate and mechanism of polymorphic transformation of calcium carbonate in water 100 (1990) 159
Oliver, P.E., see Jones 100 (1990) 395
Onuma, K., K. Tsukamoto and I. Sunagawa, Growth kinetics of K-alum crystals in relation to the surface supersaturations 100 (1990) 125
Otani, S., T. Tanaka and Y. Ishizawa, Automatic preparation of $LaB_6$ single crystals by the floating zone technique 100 (1990) 658
Ouazzani, J. and F. Rosenberger, Three-dimensional modelling of horizontal chemical vapor deposition. I. MOCVD at atmospheric pressure 100 (1990) 545

Palfrey, H.D., see Falconer 100 (1990) 275
Paret-Harter, I., see Duffar 100 (1990) 171
Penisson, J.M., see Giorgio 100 (1990) 254
Peshev, P., see Iliev 100 (1990) 219
Peshev, P., see Iliev 100 (1990) 225
Péter, Á., see Földvári 100 (1990) 75
Petty, J.T., see Barber 100 (1990) 185
Piñol, S., J. Fontcuberta and C. Miravitlles, High temperature superconductor composites by a modified Bridgman method 100 (1990) 286
Poudoulec, A., B. Guenais, C. D'Anterroches and A. Regreny, Interface structure of a GaAs–AlAs superlattice MBE grown on a GaAs vicinal surface 100 (1990) 529

Ramasamy, P., see Kumar 100 (1990) 651
Ramos, A. and M. Gandais, Earliest stages of crystal growth in a silicate glass containing titanium and zirconium as nucleating elements – HRTEM and XAS study 100 (1990) 471
Rashkovich, L.N. and B.Yu. Shekunov, Morphology of growing vicinal surface; prismatic faces of ADP and KDP crystals in solutions 100 (1990) 133
Regreny, A., see Poudoulec 100 (1990) 529
Riahi, D.N., see Lie 100 (1990) 450
Richter, W., see Fotiadis 100 (1990) 577
Rigano, P.M. and T. Chierchie, Morphology and distribution of copper nuclei electrolytically deposited on palladium (111) single crystal electrodes 100 (1990) 212
Rizzo, A., see De Blasi 100 (1990) 347
Roberts, J.S., see Jones 100 (1990) 395
Rooney, M.-L.T., see Frank 100 (1990) 354

Rosenberger, F., see Xiao 100 (1990) 313
Rosenberger, F., see Ouazzani 100 (1990) 545

Salviati, G., see Holt 100 (1990) 497
Sanders, B.W. and A.K. Kitai, The electrodeposition of thin film zinc sulphide from thiosulphate solution 100 (1990) 405
Sarma, J.A.R.P., see Feinstein-Jaffe 100 (1990) 68
Sasaki, K., see Zhang 100 (1990) 411
Sawada, K., see Ogino 100 (1990) 159
Schmid, H., see Sun 100 (1990) 297
Schmid, H., see Sun 100 (1990) 605
Scholz, F., see Weber 100 (1990) 467
Ščrbak, M., see Stubičar 100 (1990) 261
Sekerka, R.F., see Brush 100 (1990) 89
Sekerka, R.F., see Coriell 100 (1990) 459
Shekunov, B.Yu, see Rashkovich 100 (1990) 133
Shen, H.Y., see Zhang 100 (1990) 655
Shetty, R., R. Balasubramanian and W.R. Wilcox, Surface tension and contact angle of molten semiconductor compounds. I. Cadmium telluride 100 (1990) 51
Shetty, R., R. Balasubramanian and W.R. Wilcox, Surface tension and contact angle of molten semiconductor compounds. II. Cadmium arsenide 100 (1990) 58
Shigematsu, K., H. Takei, I. Higashi, K. Hoshino, H. Takahara and M. Aono, Growth of single crystals of Bi–Sr–Ca–Cu–O 100 (1990) 661
Shimizu, K., see Kubota 100 (1990) 491
Shishodia, P.K., see Dawar 100 (1990) 281
Sinclair, D.M., see Cundy 100 (1990) 189
Smet, F. and W.J.P. van Enckevort, In situ microscopic investigations of crystal growth processes in the system $Bi_2O_3$–$GeO_2$ 100 (1990) 417
Smetana, P., see Kim 100 (1990) 527
Smith, A.D., see Manne 100 (1990) 627
Spear, P.M., see Frank 100 (1990) 354
Stapor, A., see Weber 100 (1990) 467
Stern, E.J., see Hurle 100 (1990) 11
Stuart, D., see Walker 100 (1990) 168
Stubičar, M., see Stubičar 100 (1990) 261
Stubičar, N., M. Ščrbak and M. Stubičar, Crystal growth of lead fluoride using the constant composition method. II. The effect of Pb/F activity ratio on the kinetics of crystal growth 100 (1990) 261
Suda, T., see Kuroyanagi 100 (1990) 1
Sun, B.N. and H. Schmid, Surface morphology study of $YBa_2Cu_3O_{7-x}$ crystals grown from high temperature solutions 100 (1990) 297
Sun, B.N., P. Hartman, C.F. Woensdregt and H. Schmid, Structural morphology of $YBa_2Cu_3O_{7-x}$ 100 (1990) 605
Sunagawa, I., see Onuma 100 (1990) 125
Suzuki, T., see Ogino 100 (1990) 159

Takahara, H., see Shigematsu 100 (1990) 661
Takei, H., see Shigematsu 100 (1990) 661
Takeuchi, S., see Iwanaga 100 (1990) 271
Taki, S., see Hosaka 100 (1990) 343
Tamamura, K., K. Akimoto and Y. Mori, Silicon growth on germanium substrates by electron cyclotron resonance plasma excitation 100 (1990) 643
Tanaka, T., see Otani 100 (1990) 658
Tellier, C.R., Etching of semiconductor cubic crystals: determination of the dissolution slowness surfaces 100 (1990) 515
Thirumavalavan, M., see Kumar 100 (1990) 651
Tsubarai, Y., see Nishikawa 100 (1990) 63
Tsukamoto, K., see Onuma 100 (1990) 125

Usuda, K., see Yasuami 100 (1990) 600
Uyeda, N., see Kobayashi 100 (1990) 676

Van der Leeden, M.C. and G.M. van Rosmalen, Effect of the molecular weight of polyphosphinoacrylates on their performance in $BaSO_4$ growth retardation 100 (1990) 109
Van der Voort, E., Observations on growth form and habit of potassium nitrate as a function of the temperature 100 (1990) 539
Van Enkevort, W.J.P., see Smet 100 (1990) 417
Van Rosmalen, G.M., see Van der Leeden 100 (1990) 109
Van Rosmalen, G.M., see De Vreugd 100 (1990) 117
Verheijen, M.A., see Vogels 100 (1990) 439
Vogels, L.J.P., H.A.M. Marsman, M.A. Verheijen, P. Bennema and M. Elwenspoek, On the growth of ammonium nitrate(III) crystals 100 (1990) 439
Voszka, R., see Földvári 100 (1990) 75
Vuillemin, J.J. and C.Y. Lee, Suppression of lineage structure in float zoned platinum 100 (1990) 279

Walker, J.S., see Williams 100 (1990) 233
Walker, J.S., see Lie 100 (1990) 450
Walker, N., S. Marcinowski, H. Hillen, W. Mächtle, Y. Jones and D. Stuart, Crystallization of human tumour necrosis factor 100 (1990) 168
Wang, Guofu, Zundu Luo and Jiming Chen, Flux growth of $Cr^{3+}$ : $LiGaW_2O_8$ crystals and phase equilibrium of $LiGaW_2O_8$–$Li_2B_2O_4$ 100 (1990) 447
Wang, W.S., see Hulliger 100 (1990) 640
Watanabe, A., see Isu 100 (1990) 433
Watanabe, K., An approach to the growth of $YBa_2Cu_3O_{7-x}$ single crystals by the flux method 100 (1990) 293
Weber, J., M. Moser, A. Stapor, F. Scholz, G. Hörcher, A. Forchel, G. Bohnert, A. Hangleiter, A. Hammel and J. Weidlein, MOVPE grown InP : Yb layers using $Yb(IpCp)_3$ as a new doping source 100 (1990) 467

Weber, W., G. Neumann and G. Müller, Stabilizing influence of the Coriolis force during melt growth on a centrifuge 100 (1990) 145
Wei Qiuming, see Huang 100 (1990) 26
Weidlein, J., see Weber 100 (1990) 467
Welbourn, C.M., see Frank 100 (1990) 354
Wenzl, H., K. Mika and D. Henkel, Phase relations and point defect equilibria in GaAs crystal growth 100 (1990) 377
Westwood, D.I., see Woolf 100 (1990) 635
Wheeler, A.A., G.B. McFadden, S.R. Coriell and D.T.J. Hurle, The effect of an electric field on the morphological stability of the crystal–melt interface of a binary alloy. III. Weakly nonlinear theory 100 (1990) 78
Williams, M.G., J.S. Walker and W.E. Langlois, Melt motion in a Czochralski puller with a weak transverse magnetic field 100 (1990) 233
Wilcox, W.R., see Shetty 100 (1990) 51
Wilcox, W.R., see Shetty 100 (1990) 58
Williams, R.H., see Woolf 100 (1990) 635
Woensdregt, C.F., see Sun 100 (1990) 605
Wolfram, P., see Franke 100 (1990) 309
Woolf, D.A., D.I. Westwood and R.H. Williams, Characterization of the MBE growth of GaAs/Si(100) as a function of epilayer thickness 100 (1990) 635
Wright, P.J., see Jones 100 (1990) 395
Xiao, R.F., J.I.D. Alexander and F. Rosenberger, Growth morphology with anisotropic surface kinetics 100 (1990) 313
Xu, J.J., Global neutral stability of dendrite growth and selection condition of tip velocity 100 (1990) 481
Yasuami, S., K. Usuda, Y. Higashi, H. Kawata and M. Ando, Lattice spacings of LEC-grown and MLEC-grown GaAs crystals 100 (1990) 600
Young, G.W., see Humphreys 100 (1990) 31
Zhang, G., T. Kinoshita, K. Sasaki, Y. Goto and M. Nakayama, Crystal growth of 4-Br-4′-methoxychalcone and its characterization 100 (1990) 411
Zhang, W.J., and H.Y. Shen, Crystal growth of $NaNb_3O_8$ solid solution by Kyropoulos method 100 (1990) 655
Zhmakin, A.I., see Makarov 100 (1990) 646
Zhou Yaohe, see Huang 100 (1990) 26

Journal of Crystal Growth 100 (1990) 682–684
North-Holland

## SUBJECT INDEX

Adsorption 109, 117, 268
Alloys 26, 78, 459
Aluminum
– gallium arsenide 330, 395, 646
– organic 63, 395, 646
Ammonium
– dihydrogen phosphate 133
– nitrate 439
Apparatus
– for melt growth
– – by low temperature method
– – – using flow system
– – – – of potassium nitrate 539
– – – using temperature difference technique
– – – – of organic crystal 640
– – by top seeded growth
– – – of bismuth strontium calcium cuprate 661
– for thin films growth
– – by plasma excitation
– – – of silicon 643
– for miscellaneous purposes
– – Raman spectroscopy under hydrothermal conditions 343
Aspartame 491

Barium
– sulphate 109
Bismuth
– germanate system 417
– strontium calcium cuprate 286, 303, 661
– tellurite 75
Burton–Cabrera–Frank theory 125

Cadmium
– mercury telluride 275
– telluride 51, 508
Calcite 203
Calcium
– carbonate 159
– fluoride 117
– oxalate hydrates 627
Cellular growth 31
Characterization methods
– by absorption spectroscopy 354, 405, 411
– by Auger electron spectroscopy 405
– by cathodoluminescence 354
– by differential scanning calorimetry 68
– by differential thermal analysis 447
– by electrical methods 1, 5, 395, 635, 661
– by electron diffraction 254, 347
– by electron microscopy 1, 68, 189, 212, 219, 254, 261, 271, 405, 433, 471, 497, 508, 529, 615, 627
– by Fourier transform infrared 117
– by inductively coupled plasma spectrometry 395
– by infrared spectroscopy 354
– by interferometry 125, 133
– by mass spectrometry 68, 615
– by nuclear magnetic resonance 68, 395
– by optical microscopy 68, 125, 261, 354, 411, 417, 437, 635, 658
– by optical properties 281
– by particle size distribution analysis 189
– by piezoelectricity 75
– by photoluminescence 5, 395, 467
– by radiotracer method 275
– by Raman spectroscopy 343, 577
– by reflection high energy electron diffraction 433, 615, 643
– by secondary ion mass spectrometry 5, 275, 309, 467
– by transmission spectroscopy 75, 281
– by turbidity measurements 117
– by X-ray methods 1, 63, 68, 168, 219, 261, 279, 281, 330, 354, 405, 411, 417, 447, 471, 508, 600, 627, 635, 640, 651, 661
Computer simulation 31, 233, 515
Constitutional supercooling 26, 31, 219
Contact angle 51, 58
Convection 145, 545, 640, 646
Copper 212

Dendritic growth 481
Devices 275, 330
Diamond 354
Diffusional control 26, 313, 439, 577
Dislocations 125, 133, 279, 297, 347, 354, 600, 676
Dissolution 125, 159, 219, 225
Dopants 63, 275, 309, 467

Etching
– chemical 5, 515
– thermal 125

Finite element analysis 577

Gallium
– arsenide 5, 58, 377, 433, 529, 545, 600, 635
– organic 5, 63, 395, 433, 545, 646
Germanium 11
– oxide phthalocyanine polymer 676
Grain boundary 268, 279

Heat flow control 26, 89, 577
Heterojunction 275, 330
Hydrodynamics 233

Impurity 5, 125, 133, 275, 297, 354, 395, 491, 597, 627
Indium

– antimonide 145, 171
– gallium aluminum phosphide 63
– organic 63
– phosphide 309, 467, 497
– selenide 347
Interface 26, 31, 78, 89, 125, 309, 313, 330, 529, 646

Kinetics
– of carbon incorporation 5
– of dissolution 417, 515
– of growth 109, 117, 125, 133, 159, 189, 203, 261, 313, 343, 417, 439, 471, 491, 508, 539, 545, 643
– of interface control 11, 26, 125, 203, 330
– of nucleation 189, 491
– of polymorphic transformation 159

Lanthanum
– boride 658
Lasers 447, 651
Lattice mismatch 635
Lead
– fluoride 261
Lithium
– gallium tungstate 447

Mathematical model 11, 145, 481
Melt growth technique
– by Bridgman–Stockbarger method
– – of indium antimonide 145, 171
– – of indium selenide 347
– by Czochralski method
– – of bismuth tellurite 75
– – of gallium arsenide 377, 600
– – of germanium 11
– – of indium phosphide 497
– – of silicon 527
– – melt motion of 233
– – theory of 11
– by floating zone method
– – of lanthanum boride 658
– – of platinum 279
– – of silicon 450
– – theory of 31
– by Kyropoulos method
– – of sodium niobate system 655
– by sealed cavity
– – of bismuth strontium calcium cuprate 303
– by uniaxial solidification
– – of alloys 26, 78
– – of bismuth strontium calcium cuprate 286
– in situ microscopic observation
– – of bismuth germanate system 417
Mercury
– cadmium telluride 275
Microgravity 58, 171, 459
Monte Carlo method 313
Morphological stability 31, 89, 133, 313, 459, 481
Morphology of growth 78, 168, 171, 185, 212, 254, 261, 281, 286, 303, 343, 411, 417, 433, 539, 605, 615, 627, 640, 651

Neodymium
– aluminum borate 651
Nonlinear optics 219, 225, 411, 640
Nonlinear theory 78, 89
Nucleation 189, 212, 268, 417, 471, 491, 676
Numbers
– Grashof 233, 577
– Nusselt 577
– Peclet 577
– Prandtl 577
– Rayleigh 145, 545, 577
– Reynolds 233, 545, 577
– Schmidt 577
– Taylor 145

Optical isomers 68
Organic crystals 68, 168, 185, 411, 491, 640, 676

Palladium 254
Perfection of crystals 168, 275, 279, 354, 377, 497, 600, 635, 640, 676
Periodic bond chain theory 605
Phase diagrams 219, 225, 377, 417, 447, 661
Phenomenological theory 439
Platinum 279
Polymorphism/polytypism 347, 651
Potassium
– alum 125
– dihydrogen phosphate 133
– hydrogen phthalate 185
– nitrate 539
– titanyl phosphate 219, 225
Precursor 395, 467
Proteins 168
Purification of materials 395

Quartz 343
Quantum wells/size effects 529

Silica
– molecular sieve 189
Silicon 450, 527, 643
– carbide 615
– dioxide 343
– nitride 271
Sodium
– niobate system 655
Solid growth technique
– by crystallization from glass
– – of titanium zirconate 471
Solution growth technique
– by electrodeposition
– – of copper 212
– – of zinc sulphide 405
– by flux method

– – of bismuth strontium calcium cuprate 661
– – of lithium gallium tungstate 447
– – of neodymium aluminum borate 651
– – of potassium titanyl phosphate 219, 225
– – of yttrium barium cuprate 293, 297, 605
– by hydrothermal growth
– – of silica molecular sieve 189
– – of quartz 343
– by low temperature method
– – of ammonium dihydrogen phosphate 133
– – of ammonium nitrate 439
– – of aspartame 491
– – of barium sulphate 109
– – of calcium carbonate 159, 203
– – of calcium fluoride 117
– – of calcium oxalate hydrates 627
– – of lead fluoride 261
– – of organic crystal 411, 640
– – of potassium alum 125
– – of potassium dihydrogen phosphate 133
– – of potassium nitrate 539
Stefan problem or moving boundary problem 31, 89, 515
Step 133, 297, 330, 354, 439, 529
Strain 159, 279, 297, 527, 600
Superconductivity
– bulk 286, 297, 303, 605, 661
– characterization 286, 297, 303, 661
– crystal chemistry 286, 303, 605, 661
– high $T_c$ 286, 293, 297, 303, 605, 661
– stoichiometry 286, 303, 605
– survey of fluxes for growth 293
Supercooling, supersaturation 125, 133, 159, 203, 219, 261, 313, 491, 539, 627
Superlattices 529
Surface energy, determination of 133, 605
Surface processes 203, 313
Surface structure 133, 297, 354, 433, 605

Thermodynamics 261
Thin film growth
– by liquid phase epitaxy
– – of mercury cadmium telluride 275
– by molecular beam epitaxy
– – of gallium arsenide 5, 433, 529, 635
– – of silicon carbide 615
– by plasma excitation
– – of silicon 643
– by vapor phase epitaxy
– – through chemical vapor deposition
– – – theory of 577
– – through evaporation and condensation
– – – of germanium oxide phthalocyanine polymer 676
– – – of zinc selenide 281
– – through metalorganic chemical vapor deposition
– – – of aluminum gallium arsenide 330, 395, 646
– – – of cadmium telluride 508
– – – of gallium arsenide 545
– – – of indium gallium aluminum phosphide 63
– – – of indium phosphide 309, 467
– – – theory of 545
– effects of substrate heterogeneity on 268
Titanium
– zirconate 471
Twinning 497

Vapor growth technique
– by chemical transport
– – of zinc phosphide 1
– by evaporation and condensation
– – of palladium 254
– – of proteins 168
– theory of 313
Vapor–liquid–solid growth
– of silicon nitride 271

Wetting 51, 58, 268
Whisker growth
– of silicon nitride 271

Yttrium
– barium cuprate 293, 605
– organic 467

Zinc
– organic 63
– phosphide 1
– selenide 281
– sulphide 405